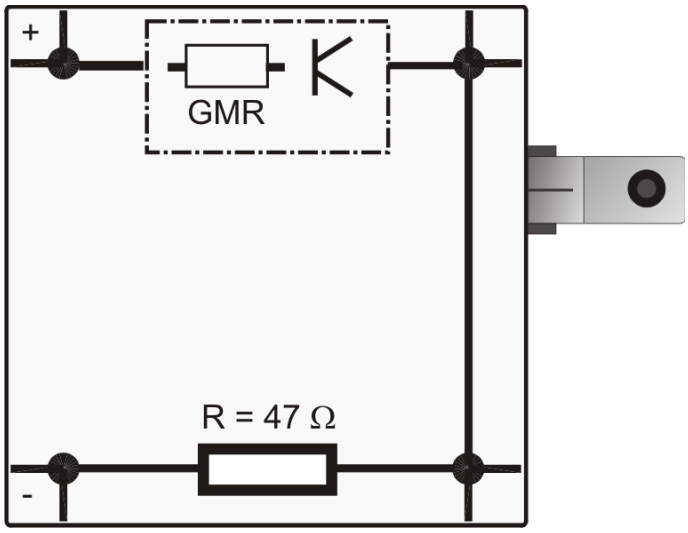
PHYSIK CHEMIE BIOLOGIE TECHNIK

LD DIDACTIC

10/14-W2010-Wei



Instruction Manual 582 6241

STE Automotive Wheel Sensor MR

1 Description

The plug-in element is used with circuits built on the plug-in boards DIN A4 or DIN A3. This is an active wheel sensor based on giant magnetoresistance.

Safety notes

- Only operate the device with an appropriate power supply.
- Make sure all connections are correct.
- Only use the device in dry areas.

2 Technical Data

- Supply voltage: U = 12 V
- Low output current: I_{CCL} = 7 mA
- Protocol output current: I_{CCPH} = 14 mA
- Speed output current: I_{CCSH} = 28 mA
- Distance capture: d = 0 – 4.5 mm
- Tooth frequency: 0 – 2,500 Hz
- Bit time: t_d = 50 µs
- Shunt: R = 47 Ω

3 Example of Application

The sensor reacts to magnetic fields by changing the resistance. In connection with the *trigger wheel 582628*, the sensor sends a speed signal as well as a digital data packet with information on the rotational direction and the distance to the trigger wheel. The sensor has a current loop interface with three levels; the plug-in element already integrates a 47 Ω shunt resistor.

This sensor has the special feature of emitting a digital signal even if the wheel is still.

4 Data Bit Definitions

DATA BIT	SYMBOL	DESCRIPTION
0	AR	Air gap reserve
1	M	Mode
2	Vin	Digital input state
3	VDR	Validation of detection of the direction of rotation
4	DR	Direction of rotation
5	SD0	Space detection bit 0
6	SD1	Space detection bit 1
7	SD2	Space detection bit 2
8	P	Parity bit

LD DIDACTIC GMBH · Leyboldstrasse 1 · D-50354 Huerth / Germany · Phone +49 (0)2233 604-0 · Fax +49 (0)2233 604-222 · e-mail: info@ld-didactic.de

© by LD Didactic GmbH

Printed in the Federal Republic of Germany
Technical alterations reserved